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ABSTRACT

The use of computer-assisted programs in career guidance and counseling has increased significantly in the past 20 years. However, such a rapidly emerging technology has potential hazards if adequate safeguards are not developed. Professional associations and training programs must adopt leadership roles and ethical positions and standards of operation. To guard against unwarranted access to information, issues of confidentiality, e.g., the amount and type of data to store, retrieval rights, research uses, and networking banks, must be addressed. Graduate training programs need to develop computer literacy in their students, as well as training them to be computer-assisted counselors. As our society becomes overloaded with information and the overwhelming number of choices available through readily accessible technology, the counselor must be trained to assist the client in becoming self-fulfilled at a technological and a personal level. Further, from an operational viewpoint, any incorporation of computers into a counseling service must also include provisions for on-going evaluation, maintenance, and updating of the hardware and software. Finally, a computer network, and clearinghouses for the exchange of software programs and ideas must be supported and developed at a national level. (BL)

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"ETHICS IN TECHNOLOGY"

by

Cynthia S. Johnson

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ABSTRACT

"Ethics in Technology" by Cynthia S. Johnson

Ethical considerations for the counseling profession's use of technology are suggested and some standards of operation are proposed. Potential societal problems raised by the technology and their ethical implications are addressed. Finally, specific suggestions for action by professional association are proposed.

BIOGRAPHICAL DATA

Cynthia S. Johnson is currently an assistant professor in the Counseling and Personnel Service Department at the University of Maryland, College Park.

She has worked with computer-assisted guidance programs since 1976 and has consulted for many colleges and universities in the United States, Canada, and Great Britian.

She is the editor of the book, "Microcomputers and the School Counselor," and serves as director of counselor training for Project LEARN. LEARN is funded by the W.K. Kellogg Foundation and has as its goal the development of a new delivery system for the adult learner that embraces current technologies.

The use of technology in counseling--specifically computer technology--has increased significantly in secondary and postsecondary settings since the mid-1960s, when more than 25 computer-assisted programs in career guidance and counseling were developed by pioneers like JoAnn Harris-Bowlsbey(1983).

Computers are currently being used to manage career centers, provide career information, guidance, job placement; to do assessment and testing; and to aid in personal counseling. A lag still exists between the development of hardware and software, but more and more computer programs are being written to meet the varied philosophies and needs of the profession.

The effectiveness of these systems has been proved (Holland, 1976). No longer can one-to-one counseling alone serve society. Computers can help.

Although the counseling profession has not been at the forefront of the technological revolution, decreased costs of small, personal microcomputers and increased availability of suitable software allowed many career practitioners and counselors to explore and utilize--rather than fear and avoid--the new tools that the 1980s have to offer.

No longer do pioneers like Bowlsbey need to assure counselors that they will not be replaced by large cathode ray tubes.

Attitudinal resistance has diminished greatly.

Emerging Concerns

Indeed, the profession has discovered the computer's potential to provide invaluable assistance to the counselor. But it also has learned of the computer's potential to harm if adequate safeguards do not exist. New cautions and questions are being voiced about these hazards, and the profession is demanding answers. Some of the problems are:

- Professional associations have not developed standards of operation for the technology. Ethical statements have not been adopted.
- Few counselor training programs provide graduate students with even minimal levels of computer literacy or training, let alone computer security and ethical considerations. Professionals now must rely on inservice training and professional development activities to become knowledgeable.
- Most software developers of current computer-assisted guidance systems state that these systems are not "stand alone," that is, their use should be monitored by trained counselors (Chapman & Katz, 1983). Yet, many computer centers are staffed by students, paraprofessionals, or have no staff at all.

Another area of potential problems is one of computer credibility. Students tend to give credence to information provided by a computer, but findings by a study funded by the National Occupational Information Coordinating Committee (NOICC, 1977) found that occupational data on some computer information systems was inaccurate.

Also, computer errors can and have occurred in scoring, and students

can draw erroneous conclusions from videodisc or computer interpretations (Sampson, in press).

Ethical considerations are also being raised. For example, a student in a crisis may not be able to concentrate or respond adequately to a computer system (Johnson, Godin, & Bloomquist, 1981). Students who are not adequately screened or oriented to a computer program may neither need nor benefit from a particular system.

The kinds of information that should be stored on a computer and who has access to that information raises new issues of confidentiality for the profession. For example, personal information about a student might be accessed by another student helper or potential employer.

The computer provides an excellent "window" to decision making for researchers, but human subjects standards also need to be applied with this new tool.

In addition, there are larger societal issues raised by the technology that need to be addressed by the profession. The movement from an industrial society to an information society that is heavily dependent on technology may create problems and concerns for students and clients served by the profession (Naisbett, 1982). The information society will reconstruct social and occupational roles, and career guidance programs must consider technological effects when planning the future (Herr, 1982).

What will the role of counselors be in assisting students or clients with coping with the overload of information and the "overchoice" (Toffler, 1970) the technology will present? Lopez (1983) stated, "Attention should be given to the stress intrinsic in the efforts of technology."

What about the impact of the increased dependence on computer skills in our economy on functionally illiterate persons and the "have-nots?"

Preschool children are accessing computers at Bank Street in New York and at The University of Maryland Children's Center at ages 3 and 4. What will the long-term effects be, if any, on these children?

ETHICAL CONCERNS

The Role of the Counselor

The question of how counselors use the new tool with the student is a critical one. As noted above, computer information systems are not stand-alone systems and thus do require the assistance of a professional counselor. Sampson and Stripling (1979) found that a structured approach to the computer program, which included a systematic introduction and follow-up by a counselor, was advantageous. Pyle and Stripling (1976) and Devine (1975) found significant changes in the career maturity of clients when computer-assisted guidance was used with counselor intervention. No significant change was found when the computer was introduced alone.

Additionally, Rohner and Simonson (1981) and Schrami (1981) found that anxiety concerning computer use has a negative effect on individuals' performance on the computer. Knight (1979) and Stirtz (1972) found that direct experience with a computer in a supportive and structured setting resulted in the reduction of anxiety and an improvement in attitude toward computer use.

Of equal concern is the student that has an unrealistic expectation of the computer or leaves the computer program with misconceptions about what "the computer told them to do."

Counselors have not, for the most part, learned the skills necessary to use the computer as an effective counseling tool. Psychometrics training can teach them how to use testing. Training in counselor effectiveness may also be important with computers. Counselors need to learn to integrate the computer with the total guidance process and assure the compatibility of the computer with the philosophical beliefs of the counselor.

Other roles of the counselor are to:

1. Ensure that the client's needs are assessed to determine the appropriateness of using the computer.
2. Ensure that an introduction to the use of computer-assisted guidance, testing, and counseling is available to reduce anxiety, correct misconceptions, and eliminate excessive "computer credibility."
3. Ensure that follow-up occurs with a trained professional when using a computer-assisted guidance, counseling, or testing program.

Confidentiality

Dankowski and Dankowski (1982) suggested that counselors "not provide sensitive client information for entry into electronic data storage systems" (p.374). Super (1973) stated, "Non-computerized records have occasionally been abused, but computerized records lend themselves to larger scale abuse."

Issues related to confidentiality include:

1. The amount and type of data that should be stored. The data should be limited to information that is appropriate and necessary for the services being provided.

2. Duration of the retention of the data. Confidential data maintained on a computer should be destroyed after it is determined that the information is no longer of any value in providing services.

3. Accuracy of the data. Confidential data should be accurate and complete.

4. Access to the data. Access to confidential data should be restricted to appropriate professionals by using the best computer security methods available.

5. Concerns about research conducted using a computer. Research participation release forms should be completed by any individual who has collected individually identifiable data as a result of using a computer-assisted counseling, testing, or guidance system.

6. Assurance that client information is not made part of any large networking bank. Counselors should ensure that it is not possible to identify, with any particular individual, confidential data maintained in a computerized data bank that is accessible through a computer network.

Computer-Assisted Testing and Assessment

Sampson and Pyle (1983) suggested the following:

1. Because of programming or equipment problems, test-scoring may be inaccurate. The counselor needs to ensure that computer-controlled test-scoring is functioning properly and the results are accurate.
2. Some testing programs provide video interpretation. Are the test interpretations accurate in terms of the test author's intent? Does the counselor provide an individual or group opportunity to discuss the test results?

The above are just some of the ethical concerns proposed by a number of professionals. As computer use increases and more professional associations review the ethical issues, the list surely will grow.

STANDARDS OF OPERATION

Management and Implementation

Most professionals have not had an opportunity to learn how to introduce and manage this new technology. There are many issues of management and implementation that must be addressed.

Strategies for implementing the new technology are necessary and critical. The major problem that has been identified with computer acquisition has not been money, it has been the method of implementation. Computers should be introduced as if the manager is introducing a new program or staff position. The environment must be prepared and a long-range plan for its use developed.

The selection and assignment of qualified people to staff the computer and continued inservice training should also occur. Hardware and software must also be selected and maintained.

Another management issue is congruence with prevailing philosophical and theoretical constructs of an office or environment. Some personal counseling programs range from Rogerian to Skinnerian in theoretic foundation, and leading computer-assisted guidance systems have conflicting philosophies.

Also, on-going evaluation of both hardware and software must be conducted to determine if the program is meeting its original goals. Decisions about what group can benefit most from the computer may need to be addressed. The manager is also responsible for ensuring that computer applications are used in an ethical and legally responsible way (Pyle, 1983).

Additional suggestions on management standards appear in a NASPA journal article by Sampson entitled "Effective Computer Resource Management: Keeping the Tail from Wagging the Dog."

Counselor Training

Standards for training counselors in the use of computers include:

- knowledge about and standards for the selection and evaluation of computer hardware and software
- an understanding about the rationale for computer application
- knowledge about operational procedure
- training in appropriate counseling techniques, support, and intervention strategies
- an understanding of the ethical issues and standards of operation

Standards for software or courseware programs include:

- assurance that information contained on a computer is accurate and timely

- software vendors should update their programs annually when disseminating information such as occupational data
- test scoring and interpretation should accurately reflect the test author
- hardware should be maintained regularly to ensure that programs will not be lost or clients unduly delayed
- lag time in terms of computer response should be minimized
- counselors should not allow unauthorized duplication or modification of copyrighted software

SOCIETAL ISSUES REGARDING COMPUTER ETHICS AND COUNSELORS' ROLE

Many futurists proclaim an increasing need for the human touch and personal growth as we move toward a technological age that Naisbett (1982) described as High Tech-High Touch.

Waterlow (1982) stated that for an individual to achieve personal self-fulfillment, that individual must learn to communicate at both the technological level and the soul level where person blends with person.

And, the helping profession may play a larger societal role with the new technology by:

- assisting the student in making decisions when faced with the "over-choice" syndrome
- assisting the student in developing socialization and cooperation skills.

The New York Times (1982) suggested that computers may foster a nation of linear thinkers who don't use their intuitive intellect.

Counselors have an important role in dealing with that type of situation. And here is another societal issue that will require the counselor's assistance: The Washington Post (1983) reported that of the 2,000 largest, richest school districts, 80% had computers for instructional purposes. But of the smaller, poorer districts, only 40% had computers. The gap between the "haves" and the "have-nots" may widen as the economy becomes increasingly dependent on computer literacy.

One final example is a concern being raised by Julie McGee, a guidance director in Illinois, as well as others, about girls and women and computers. Because of the so-called math anxiety and the nature of the games and violence used to introduce computers, females may experience problems accessing the technology.

These and other societal concerns should be addressed by the profession as a whole and by the professional associations.

Role of Professional Associations

The following are suggested roles associations can play in the technological revolution:

1. Development of an ethical statement and minimum standards for the use of technology consistent with APA and APGA standards.
2. Assistance in the training and professional development of professionals to make them computer literate. A certificate program might even be considered. In addition, the professional associations should urge the graduate preparation programs to include computer literacy in the curriculum for future professionals.

3. The association should provide a clearinghouse for software programs and for research on their effectiveness. Very few software programs are available to the profession. The software development lags far behind the hardware development. Initially, professionals should be encouraged to share program development so everyone doesn't need to reinvent the wheel. Software development can be costly.

4. Once a critical mass of software is accumulated, a formal review procedure should be established within the professional association, and published on a regular basis.

5. Federal agencies should be asked to supply funds for initial software development and testing. Pressure should be placed on both state and federal agencies by the associations.

The U.S. Office of Technology Assessment, in a report to congress on their findings, stated that the most frequently cited barrier to current educational use of technology was the lack of adequate educational software. They said that there may be a role for the government in reducing the risks software producers currently see that inhibit major investment in quality courseware (educational software). Research and development focusing on new techniques and tools to improve understanding of the long-term psychological and cognitive impact must be studied.

Finally, the associations should take the lead in assisting the professionals not only to catch up to the revolution, but get ahead of it. Future issues concerning the application of videodiscs, videotext, and teletext are already being addressed by some parts of

the educational organization. These matters have serious implications for the counseling profession, and the professional associations should provide the necessary leadership.

CONCLUSION

Computer technology is new to the counseling profession but many gains have been made in the development of computer software and in counselor sophistication since pioneers like JoAnn Harris-Bowlsbey began their work in the mid-1960s.

What the profession needs next is for professional associations to propose an ethical statement and minimum standards of operation. The role of professional associations should also include professional development activities to teach computer literacy, support for computer courses in graduate training programs, and the development of network and clearinghouses for the exchange of software programs and ideas. The association should provide this leadership. Flagship conferences such as the one conducted at EPCOT center by ACES are important forums to assist professionals in using the new technology.

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